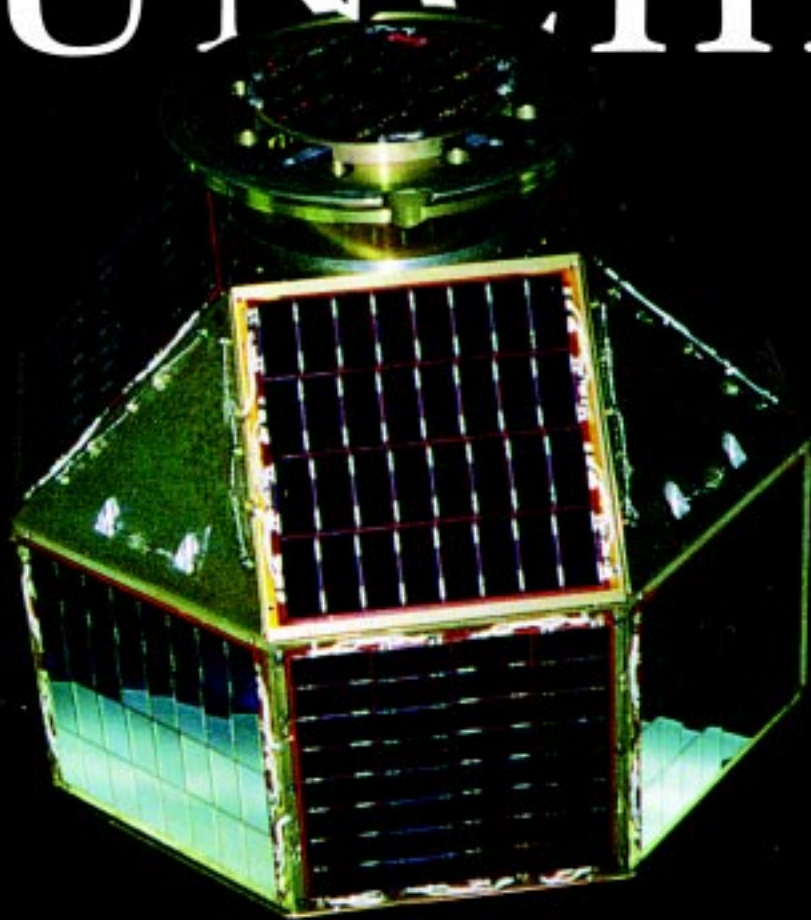


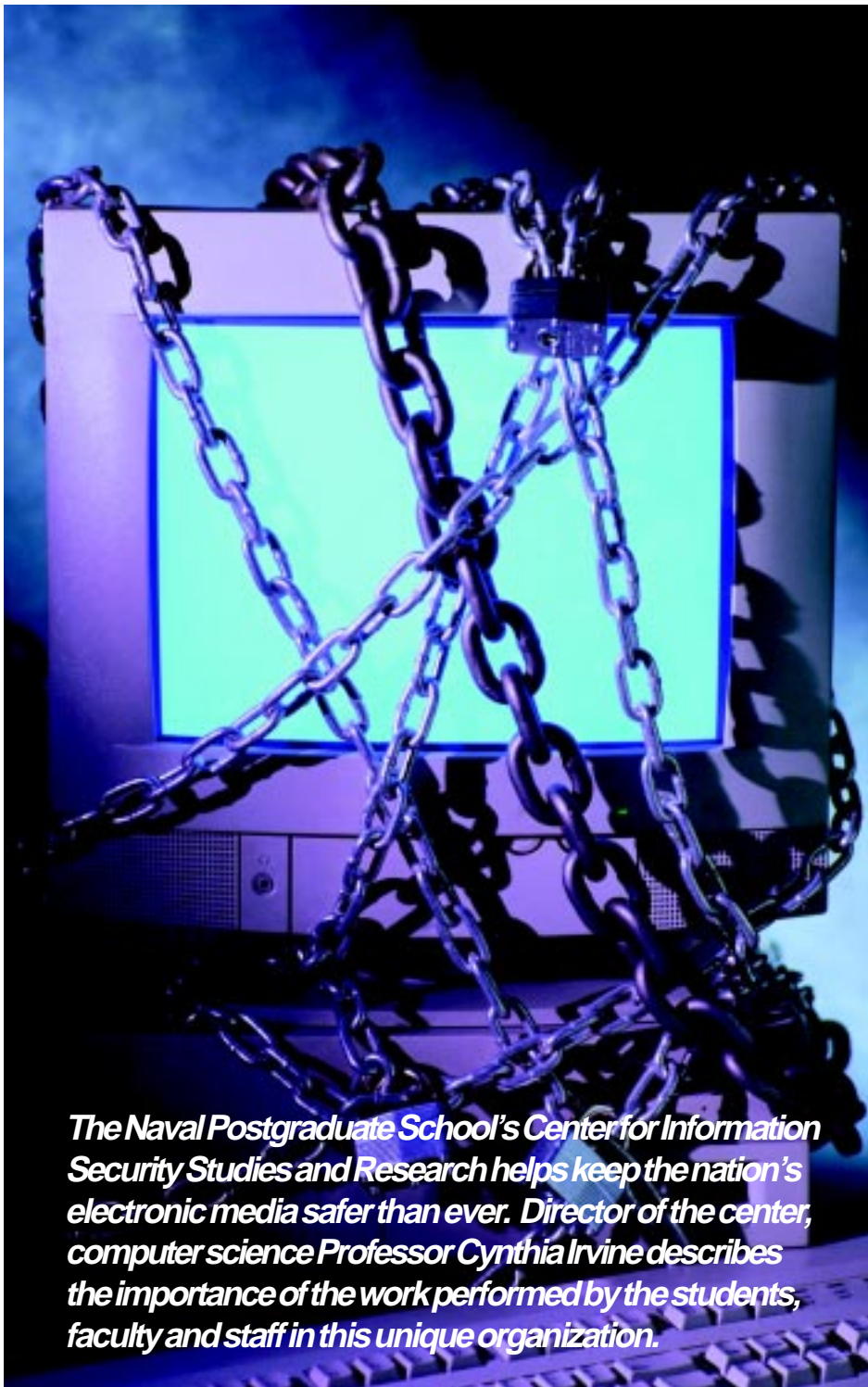
LAUNCHED



Over five years and 50 student theses later, the Naval Postgraduate School's very own Petite Amateur Navy Satellite (PANSAT) is launched into orbit from the Space Shuttle Discovery.

Alumni@NPS

Fall 1998



The Naval Postgraduate School's Center for Information Security Studies and Research helps keep the nation's electronic media safer than ever. Director of the center, computer science Professor Cynthia Irvine describes the importance of the work performed by the students, faculty and staff in this unique organization.

Computer security, or should we say "insecurity," is making news. Web sites are hacked, viruses propagate throughout PC-based computers, and vulnerabilities are discovered in commodity systems. We read about it every day now.

Unfortunately, the current generation of attacks is innocuous in comparison to what could happen.

It is the job of computer security experts to understand how requirements for the protection of information can be translated into effective protection mechanisms in computer systems. Computer security ranges from understanding broadly stated policies regarding the authorization of individuals to disclose or modify information down to board-level hardware components.

The depth to which computers are integrated into our daily lives is reflected by the degree to which national infrastructures depend upon computing. The 22 May 1998 PDD 63 White Paper describing the Clinton Administration's Policy on Critical Infrastructure Protection recommended that significant resources be directed toward improvements in research and education in the areas of computer security.

Computer security has many names: Information Warfare-Protect (IW-P), Information Assurance (IA), etc. Whatever you choose to call it, the problems boil down to the same thing: let the good guys access the appropriate information, and keep the bad guys out. Of course, the distinction between the good guys and the bad guys can sometimes become rather hazy and we may have circumstances in which only some of the people need some forms of access to the information some of the time. This makes computer security both interesting and challenging in networked environments.

Secured Computing



The Naval Postgraduate School is the vanguard when it comes to graduate education in computer security. Anticipating PDD 63 by more than five years, the faculty in the Computer Science Department at NPS has established a world-class program in information systems security (INFOSEC) education and research.

It began in 1991 when the National Security Agency helped Professor Roger Stemp start a survey course in computer security. This was soon followed by an advanced topics course used to explore recent theoretical and engineering advances in computer security.

In 1994, I joined NPS and our combined efforts lead to a rapid expansion of the program. To achieve our goals, we successfully sought not only the continued support of our NSA sponsors, but also assistance from DoN, DISA, DARPA, and others. By 1996, NPS had become the home for the first Center for INFOSEC Studies and Research (CISR) established in the United States. The center's faculty cuts across departmental boundaries and includes: Professor Fredericksen of the mathematics department as well as Professors Xie, Volpano, Warren, Rowe, Shimeall, Michael, Lundy, and me. Our staff is vital to the program's success, and includes: P. Clark, A. Cruz-Tokar, T. Levin, D. Shifflett, and R. Saunders.

Today, NPS CISR offers a broad range of activities to enhance the skills of warfighters in computer security by serving DoD needs in eight areas: curriculum development, research, laboratory development, faculty development, academic outreach, invited lectures, graduate utilization, and a visiting professor program.

There are many reasons why this is an excellent time to study computer security at NPS. First, it is easy to fit *introduction to computer security* into a student's schedule—at least one section of the course is taught every quarter.

For students whose interests are kindled by the first course, there are others: *secure management of systems*, *network security*, *database security*, *secure systems*, a course on *formalisms for computer security*, and the *advanced topics* course. NPS

CISR classes are so popular that over 290 students enrolled in its courses during FY98.

A lively research program is underway. Faculty and staff are exploring topics, including: solutions to near-term problems, new security architectures that use COTS products in secure configurations, exploration of novel hardware/software approaches to security, security for

applications, and security policy issues. NPS CISR faculty make a point of listening to the DoN IW-Protect and Information Assurance communities when helping students choose thesis topics.

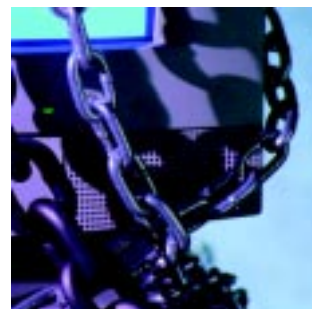
Students are able to interact with top members of the computer security community. NPS CISR has hosted dozens of invited lectures, many drawn from the commercial sector. Sometimes members of the computer security community stay as visiting professors. This fall, Mr. Clark Weissman, an active and respected member of the operating systems and computer security communities for over 35 years, will teach a class that will involve an in-depth analysis of an important IT-21 system.

The move to commercial products is underway, so we will become increasingly dependent upon the commercial sector for security solutions. A healthy and secure national infrastructure will depend upon the teaching of INFOSEC not only at NPS, but at civilian universities too. It is the civilians who, in large part, will design and develop the operating systems, networks, and applications of the future. With the support of several sponsors, NPS CISR is a proactive participant in a number of INFOSEC-education outreach efforts. We initiated and have hosted two workshops on education in computer security, both with international attendance. Our educational materials have been distributed to over 80 institutions.

We are still learning. Certain fundamental principles can always be applied to the design and development of secure systems; yet, the context in which these concepts must be used is changing. In addition to being secure, systems must satisfy a growing list of complex requirements for interoperability, performance, and ease of use. While keeping pace with this fast moving field, we help other faculty members appreciate the challenges of computer security.

Our graduates are in demand to fill critical IW-P and IA positions. The quality of their hard work is reflected in the papers they have published with faculty members. Over 24 theses have been completed or are in progress.

Are you interested in learning more about our education in computer security? We are looking at new ways to extend our program through continuing education. Our web site, located at <<http://cizr.nps.navy.mil/>>, is a resource reporting our latest developments and activities.





The Petite Amateur Navy Satellite (PANSAT) has now begun what will be more than four years orbiting the Earth. Dr. Rudy Panholzer, dean of science and engineering, and chairman of the space systems academic group, shares his story of the student-built satellite's creation, from drawing board to launch into outer space.



Launched

While the launch of the Space Shuttle Discovery will be forever remembered as John Glenn's historic return to outer space, the Naval Postgraduate School has also made history with this mission. NPS's Petite Amateur Navy Satellite (PANSAT) has begun its mission, spending the next four years circling the globe.

PANSAT is a small satellite designed and built by students, faculty, and staff at NPS. The main objective is to support the Space Systems Engineering and Space Systems Operations Curricula by providing a "hands-on" hardware project where exposure to the many facets of a space system development and life cycle can be experienced. The spacecraft itself provides digital, spread spectrum communications using an amateur radio band. PANSAT further provides educational training while in orbit through a space-based laboratory for students at NPS.

PANSAT was launched from the shuttle into a low-Earth orbit with an altitude of 345

miles and orbit inclination of 28.45°. PANSAT is manifested on the STS-95 shuttle mission as part of the third International Extreme Ultraviolet Hitchhiker (IEH-3) experiment. STS-95 (Discovery) was scheduled to launch on Oct. 29.

Integration and Testing

Integration and testing of PANSAT started June 4 at the NASA Goddard Space Flight Center (GSFC). This included a post-ship functional checkout followed by system level vibration testing, and a measurement of the spacecraft's center-of-gravity. Following integration with the IEH-3 pallet, or bridge, PANSAT was shipped to NASA Kennedy Space Center (KSC) for final integration with the Shuttle in August.

Launch and Development

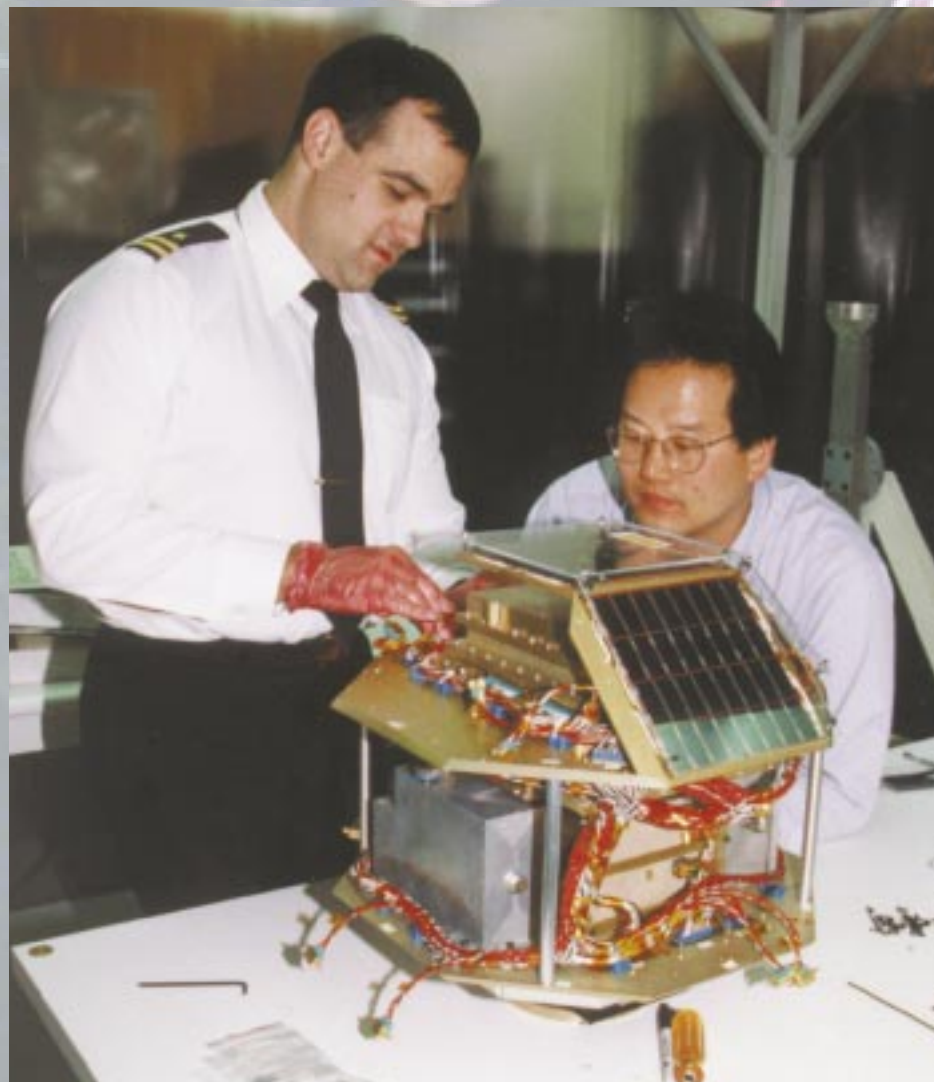
PANSAT is scheduled to be deployed early in the 10-day mission. The spacecraft will require a few orbits, at approximately 95 minutes per orbit, for battery charging prior

to first contact from NPS. Once initial on-orbit checkout has been performed and software modules have been uploaded to the spacecraft, PANSAT will begin to function as a store-and-forward communication system, or orbiting mailbox. The user interface will be much like a bulletin board system, where messages and telemetry stored on the spacecraft can be listed and downloaded to the ground. Also, amateur radio users can upload messages for retrieval by other users.

Shuttle Discovery Crew

Curtis L. Brown, Commander
Steve Lindsey, Pilot
Scott Parazynski, Mission Specialist
Steve Robinson, Mission Specialist
Pedro Duque, Mission Specialist (ESA)
John Glenn, Payload Specialist
Chiaki Mukai (NASDA), Payload Specialist

LT Ken Hunter, shown here with Space Systems Engineer Dan Sakoda, was the last student to perform thesis work on PANSAT prior to its launch in October



"I like to see ideas come to fruition. I provided the unique ability to think and implement the idea. Now to see PANSAT satisfaction unparalleled in any other


*LT Steve Bible
Class of 1995*

Satellite Communications

Spread spectrum modulation offers military advantages of low probability-of-intercept and low susceptibility-to-jamming. Spread spectrum also offers advantages in reducing potential interference within the frequency band and resistance to signal degradation due to multipath. As the name implies, spread spectrum modulation is the distribution of the radio frequency (RF) energy over a much wider bandwidth than is required for conventional communication methods. PANSAT uses direct sequence spread spectrum (DSSS) which is modulation of a carrier by a pseudorandom noise (PN) sequence. The PANSAT DSSS system applies differential binary

Not many people have ever even seen a satellite project, and to see it launched will definitely be one of the milestones I probably share till I'm very old.

*LCDR Gary Smilowitz
Class of 1997*



The PANSAT project
a problem through and
PANSAT fly gives me a sense of
er project."

phase-shift-keying (BPSK) of one PN code sequence per bit of information. Simply put, the RF signal spreads 9.842 kilobits per second of information to a 2.5 MHz wide bandwidth. The resulting RF signal lies below the noise threshold of most conventional radio receivers.

On-Orbit Operations

PANSAT provides a unique space-based laboratory for officer students following Shuttle deployment. Spacecraft operations and control will be handled by NPS students at every level throughout the

en worked on an actual
unched, I think, will
ones in my life that I'll

spacecraft's operational life. This includes day-to-day operations, as well as coordinating with other service facilities such as the U.S. Naval Academy and U.S. Air Force Academy for communications experiments.

PANSAT also offers a platform for education and research in satellite communications, attitude dynamics, orbital dynamics, thermal analysis, and other disciplines. Because of PANSAT's flexible architecture, experimental software modules can be uploaded to the spacecraft to experiment with such things as satellite communications protocols and on-board processing modules. It is also possible to upload an entirely new spacecraft operating system and transfer control literally "on-the-fly."

Potential Applications

PANSAT offers many potential applications for low-cost communication. The spread spectrum system will be available to the amateur radio community, which represents a wide user base for evaluation of the system, as well as for determining the effects, if any, wide-band transmissions will have on existing narrow-band systems. LPI provides a valuable feature for the military in downed-pilot rescue scenarios. Other possible military applications include logistics traffic, over-the-horizon communication, and mail from home. Examples of civilian uses include emergency rescue and communication to remote areas.

For more information on NPS Space programs, please see the WWW page: <<http://www.sp.nps.navy.mil/>>.

The Legacy

More than 50 theses by students are part of PANSAT's legacy. The following NPS graduates performed thesis work on PANSAT with many more individuals to follow now that the satellite is deployed. Lt. David Alldridge, USN; Lt. John Ashe, USN; Jens Bartschat (German Military Exchange Student); Lt. Steve Bible, USN; Lt. Arnold Brown, USN; Lt. Thomas Calvert, USNR; Lt. Daniel Cuff, USN; Nick Davinic (DoD Civ); Lt. David Dawson, USN; Lt. Peter A. Eagle, USN; Capt. Daniel Ellrick, USMC; Lt. Michael P. Finnegan, USN; Lt. Traci Ford, USN; Lt. Thomas Fritz, USN; Lt. Brian Gannon, USN; Olaf Gericke (German Military Exchange Student); Lt. Russell Gottfried, USN; Lt. Gregory Hand, USN; Michael Hengst (German Military Exchange Student); Lt. James Hiser, USN; James A. Horning (DoD Civ); Lt. Robert Houser, USNR; Maj. Stephen Huneke, USA; Lt. George Hunter, USA; 1st Lt. Ercument Karapinar, Turkish Army; Lt. Carl Lahti, USN; Lt. Gregory Lawrence, USN; Lt. Cmdr. David Leu, USN; Lt. Cmdr. Terrence Murray, USN; Lt. Troy Nichols, USN; Lt. Cmdr. Michael Noble, USN; Lt. Stephanie O'Neal, USN; Lt. Craig Oechsel, USN; Lt. Cmdr. Paul Overstreet, USN; Lt. Cmdr. Stephen Paluszek, USN; Lt. Cmdr. Sheila Patterson, USN; Capt. Robert Payne, USA; Lt. Lanny Rasnick, USN; Lt. Cmdr. Markham Rich, USN; Capt. Robert Rowsey, USMC; Daniel Sakoda (DoD Civ); Lt. Fred Severson, USN; Lt. Irma Sityar, USN; Lt. Cmdr. Gary Smilowitz, USN; Lt. Travis Smith, USN; Lt. Jeffrey Stewart, USN; Frank Strewinsky (German Military Exchange Student); Lt. Steve Tackett, USN; Capt. Stephen Tobin, USA; Lt. Eric Victor, USN; Lt. David Weiding, USN.

Come Back to School

As you reach retirement time for your first or second career and contemplate more time with your grandchildren, your golf game or longer talks with your broker, let me give you another possibility: come back to school. Specifically, come back to high school. We need you.

We need your experience as a successful graduate of rigorous programs to serve on high school advisory boards. We need your experience in demanding careers to provide emphasis and background to education. We need capable substitute teachers. We need your personal touch as mentors and classroom speakers.

There is an aliveness to a high school campus that you will enjoy. There are wonderfully talented young people full of hope and expectation. Equally important are the students who have yet to understand how capable they are and how successful they can be. You can make a difference and you will be rewarded.

Capt. Chuck Privateer, USN (ret.)
Drop Out Prevention Counselor
Pasco High School
Dade City, Florida

voice ALUMNI

A Need for Consultants

Alumni interested in charting new courses for their civilian careers may want to research careers in the defense consulting business. There is an increasing demand for qualified people with either military or defense industry backgrounds to enter the field of technical and management consulting. If you value more freedom of choice in your work, more leisure time, and if you enjoy meeting new challenges, consulting may be an opportunity for you.

As a direct result of a decreasing defense budget, the large defense contractors have been forced to downsize their work forces. In order to improve market share and profitability many have diversified their lines by redirecting defense technologies to meet civilian applications. Others have elected to grow market share through acquisitions and mergers. The result is a leaner, more productive, and more competitive defense industry today than has ever existed. Downsizing has also resulted in an increased dependence on independent consultants to help companies meet their business objectives.

Many companies have found that significant productivity improvements can be achieved by using independent consultants to accomplish specific short-term tasks. Although the use of consultants has long been a method of doing business by small and medium sized defense contractors, this approach has been slow to achieve acceptance as a long-term business strategy among the larger defense companies.

However, because of the leaner in-house staffs, many business opportunities are simply being abandoned due to a lack of in-house assets. Therefore, the demand for independent consultants is beginning to exceed the supply. Although most consultants support several companies, some are what I call "regular consultants." The regulars often consist of ex-employees, and proven subject-matter experts that usually support one company exclusively. Most, however, support several companies in such specialty areas as proposal development, computer graphics, software programming and engineering, hardware engineering, environmental engineering, cost development, general business support, task management, temporary general management, etc. The opportunities are diverse, challenging, and are often very lucrative.

If this field interests you, then make yourself known to the many large and small consultant firms throughout the country, or do like I did and start your own company. Use your professional associations, friends in the industry, and your networks to gain introduction. Remember that companies prefer to hire consultants that are either recommended by their other known consultants, or by their own staff. I highly recommend the NPS alumni as an excellent source of networking.

Lt. Gerald R. Valade USN (ret.)
Class of 1974
President, Management Development Services
Las Vegas, Nevada



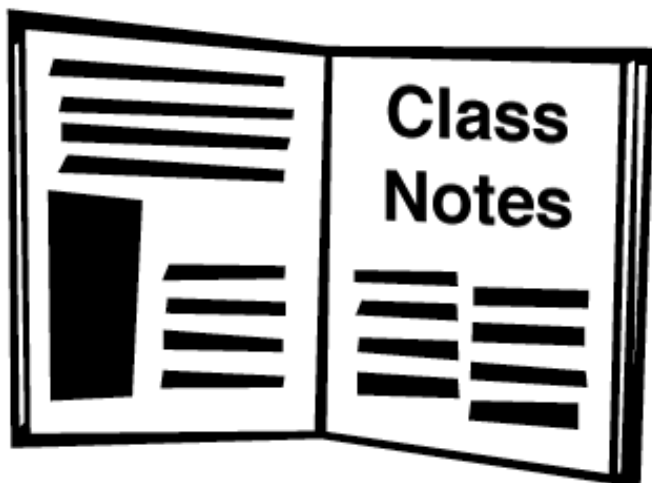
Several Naval Postgraduate School Alumni gathered at the Officer's Club at Hickam Air Force Base in Pearl Harbor, Hawaii, for the first-ever NPS alumni reception. Rear Adm. Robert C. Chaplin (pictured second from left) was joined by Deans Dan Boger, Dave Netzer, Rudy Panholzer and Peter Purdue to welcome graduates, and keep them up-to-date on NPS educational programs. The NPS team, in Hawaii to brief CINCPACFLT and others, were also given an opportunity to tap into the operating graduate community, helping them determine how to shape their future programs.

activities

ALUMNI

Dean Dan Boger addresses a group of alumni during NPS's second alumni reception, this time held in Norfolk, Va. While briefing Atlantic Fleet leadership in Norfolk, Rear Adm. Chaplin and the four academic deans took time to meet graduates, discuss further issues and partnerships for the Naval Postgraduate School, and just get acquainted.





Class of 1966

Retired U.S. Army **Lt. Col. Raymond J. Nelson** is now working as a Systems Engineer for Librascope, a subsidiary of Lockheed Martin focused on Command, Control, Communications, Computers and Intelligence.

Retired **Cmdr. T. Michael Shortal** is now employed as the Vice President of Kastle Systems LLC.

Retired **Capt. Richard W. Schaffert** received a doctorate in Political Science, and went on to author Media Coverage and Political Terrorists: A Quantitative Analysis. He currently works as a consultant for eastern European law enforcement agencies and completing his first novel on international crime and terrorism.

Class of 1974

Retired **Cmdr. Jeff Bodie** is now employed as Senior Staff Systems Engineer with Lockheed Martin Corp., Systems Engineering and Information Systems in Reston, Va.

Retired U.S. Marine Corps **Maj. James H. Haney** has

been employed as a Systems Engineer/Engineering Manager with Raytheon Systems since 1988.

Class of 1975

Retired **Lt. Cmdr. George A. Emerson** is now employed with Science Applications International Corporation (SAIC) supporting SPAWAR 051 developing a visualization, collaboration, and information management application.

Class of 1979

Retired **Cmdr. Hamilton S. Todd, Jr.** is now serving as the Director of Patient Financial Services for the Mayo Clinic in Jacksonville, FL.

Class of 1980

Retired **Capt. Ronald G. Belanger** is now working as a Project Manager for ENTEX Information Services.

Retired **Lt. Cmdr. Richard N. King** is currently employed as a DD21 Systems Engineer at Ingalls Shipbuilding, Inc. in Pascagoula, Ms.

Class of 1982

Retired **Lt. Cmdr. John M. Logan** is now employed with TRW Systems and Information Technology Group in Maryland. He is currently working with the FAA in upgrading the air traffic control system.

Reservist **Capt. Pete Smith** is working on global C4I systems for Logicon in San Diego, Calif.

Class of 1983

Retired **Cmdr. Paul Gardella** is currently employed as a Systems Engineer with BTG, Inc. in Fairfax, Va. supporting the Office of Naval Intelligence.

Retired **Cmdr. Michael C. Huete** left active duty July 1 of this year, and is now working as a Principal Engineer at Techmatics in Crystal City, Va.

Class of 1984

Retired **Cmdr. Christopher L. Hanson** is now the Vice President for Software Process Improvement Engineering for Citibank's North American Consumer Bank in New York City.

Cmdr. Roland Mulligan is serving as the Commanding Officer of USS Simpson (FFG-56).

Cmdr. Jay P. Wilkins is now serving as the U.S. Naval Attache to Ukraine.

Class of 1985

Retired **Cmdr. W. Ray Arguello** is now employed as a Environmental Engineer with Ogden Environmental and Energy Services. He recently completed a master's degree in

Hazardous Waste Engineering from the University of New Mexico.

Retired **Cmdr. Frank O. Barrett** is now employed with Welkin Associates LTD, and is currently focused on providing support to government acquisition and contracting organizations.

Canadian Air Force **Maj. Sylvain Fleurant** is now serving as a project manager for the development of electronic warfare systems for Canada's Challenger aircraft fleet.

Class of 1986

Retired **Lt. Cmdr. Robert Drake** recently accepted employment with the Department of Transportation, Office of Inspector General as an Aerospace Engineer.

Cmdr. R. C. Sain participated in the Atlantic Joint Task Force Exercise while assigned to the aircraft carrier USS Dwight D. Eisenhower.

Class of 1987

Lt. Cmdr. Desiree D. Linson is now serving as the Special Assistant to the Deputy Secretary of the Navy for Manpower and Reserve Affairs.

Class of 1988

U.S. Marine Corps **Maj. Donald M. Burlingham** recently participated in Exercise Cobra Gold '98 while assigned to the 31st Marine Expeditionary Unit, embarked aboard the ships of the USS Belleau Wood Amphibious Ready Group.

U.S. Army **Maj. Jerry**

Glasow married retired **Lt. Cmdr. Priscilla Vanderpool ('88)**. Jerry is a Staff Operations Analyst at Concepts Analysis Agency in Bethesda, Md. Priscilla is now a Senior Modeling and Simulation Engineer at the MITRE Corporation.

U.S. Army Reserves **Maj. Michael P. Larkin** is employed as an analyst for the U.S. Air Force Studies and Analysis Agency.

Retired U.S. Marine Corps **Maj. R. R. Rockey** opened his own skydiving business in southern California.

Class of 1989

U.S. NOAA **Cmdr. Eric S. Davis** is currently serving as a program manager for NOAA's Environmental Services Data and Information Management Program.

Lt. Cmdr. Enrique F. Miranda recently completed deployment on board the destroyer USS Laboon.

Retired **Lt. Cmdr. Kenneth D. Murray** is now a Senior Quality Assurance Engineer with the Launch Systems Group of Orbital Sciences Corporation.

Retired **Cmdr. Charles D. Racoosin** is now employed with Welkin Associates supporting the Naval Research Laboratory with their Interim Control Module for NASA and the International Space Station.

Cmdr. Kevin E. White is currently on deployment to the Mediterranean Sea on board USS Dwight D. Eisenhower.

Class of 1990

U.S. Marine Corps **Maj. Daniel F. Harrington** has departed on a six-month deployment with the amphibious assault ship USS Saipan.

Cmdr. Robert J. Ritchie recently participated in the Atlantic Joint Task Force Exercise assigned to the aircraft carrier USS Dwight D. Eisenhower.

Cmdr. Wayne Sweitzer is now a faculty member at the Naval War College. He holds the school's Military Chair for C4I.

Class of 1991

Cmdr. Carl A. Carpenter is now serving as the Commanding Officer of USS Fife (DD 991). The ship shifted homeports from Yokosuka, Japan, to Everett, Wa. in May.

Cmdr. Jerry W. Leugers graduated from the Naval War College in Newport, R.I. Leugers received a master's degree in National Security and Strategic Studies.

Lt. Cmdr. Christopher A. Miller recently participated in the Pacific Joint Task Force Exercise while assigned to the amphibious ship USS Essex.

Class of 1992

Cmdr. Greg Freeburn graduated from NPS's transportation management curriculum, and is now serving as the Officer in Charge of the Norfolk Naval Air Terminal, the Navy's largest aerial port in the world.

Lt. Cmdr. Mark M. Huber is currently on deployment in six-month deployment serving with Helicopter Anti-

Submarine Squadron 5 embarked on board USS John C. Stennis.

Cmdr. William G. Harrison assumed duties as Officer in Charge, Patrol Squadron Eight, Naval Air Station, Brunswick, Me.

Lt. Cmdr. James T. Loeblein completed deployment onboard USS John S. McCain. The ship was awarded the 1997 Commander, U.S. Seventh Fleet Undersea Warfare Excellence Award.

Class of 1993

Cmdr. Melissa S. Andrews

also departed on six-month deployment onboard USS Abraham Lincoln.

Class of 1994

Cmdr. Nancy Horton is currently serving as the Information Assurance Officer for CINCPACFLT in Pearl Harbor, Hawaii.

Lt. Cmdr. Steven E. Sloan helped the guided missile frigate USS Vandergrift win the Pacific Fleet's 1997 Wellness Award, the Green "H", for the second year in a row.

continued on back page

Have we got it right? Let us know!

Over 15,000 Naval Postgraduate School alumni were recently

notified of our upcoming new alumni directory and were asked for their input. If you have not already done so, please return your questionnaire today. This will ensure that your personal information will be accurately included in this great new reference book.

Within 2 to 3 months, the verification phase of this project will begin. Alumni will be receiving a telephone call from Bernard C. Harris Publishing Company, Inc., the official publisher of our directory. Please give the representative a few moments of your time to verify your listing.

To place a reservation for the Naval Postgraduate School Alumni Directory, please advise the Harris representative during this conversation, since this will be the only opportunity for alumni to order the book.

Scheduled for release in 1999, the Naval Postgraduate School Alumni Directory promises to be the definitive reference of over 15,000 NPS alumni. Don't miss the opportunity to be part of it!



Lt. George L. Snider departed on six-month deployment to the Western Pacific while serving with Commander, Amphibious Squadron Five embarked on board the USS Essex.

Class of 1995

Lt. Cmdr. George T. Fudok is currently on deployment to the Western Pacific Ocean with Carrier Early Warning Squadron 113 on board the aircraft carrier USS Abraham Lincoln.

Lt. Nancy C. Paulsen is on deployment on board the amphibious assault ship USS Tarawa.

Class of 1996

Lt. Dennis M. Irwin also

helped the USS Vandegrift win the Pacific Fleet's 1997 Wellness Award.

Lt. Leonard D. Santiago is currently on six-month deployment on board the guided missile destroyer USS Russell, which is homeported in Pearl Harbor, Hawaii.

Lt. Mark A. Vandzura participated in the Atlantic Joint Task Force Exercise while assigned to the aircraft carrier USS Dwight D. Eisenhower.

Class of 1997

Lt. Cmdr. Greg M. Jimenez recently departed on six-

month deployment to the Mediterranean Sea with the amphibious assault ship USS Saipan.

Lt. J. A. Murach is currently on six-month deployment in the Arabian Gulf while assigned to the guided missile frigate USS Kaufmann.

What's Inside

The Naval Postgraduate School's home grown satellite is launched on board the Space Shuttle Discovery. Dean of Science and Engineering Rudy Panholzer discusses the project, from conception to launch into orbit. (page 4)

In this age of internets and intranets, the security of your computer is key. NPS Professor Cynthia Irvine, Director of the Center for Information Security Studies talks about what NPS is doing to ensure secured computing (page 2).

See what your fellow alumni are saying, and doing. Check the alumni voice and alumni activities section (page 8).

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